1.3 NEED FOR PROJECT

The need for this project is established through:

- Route Importance
- Long-term Planning and Corridor Preservation
- Traffic Capacity and Level of Service
- Existing Highway Characteristics and Substandard Items
- Crashes
- Legislative Mandate and Public Input

1.3.1 Route Importance

1.3.1.1 US 8 is a Route of National and State Importance

US 8 is included in the National Highway System (NHS), which is reserved for those routes that are important to the nation's economy, defense, and mobility. It is classified as a principal arterial for through traffic and commodities transport, linking communities along the route. It is the only continuous east-west corridor and the only east-west state-designated long truck route through Polk and Barron Counties.

US 8 is designated as a Connector Route in the WisDOT Corridors 2020 plan. The Corridors 2020 Plan is a 3,650-mile (5,840-km) network of "Backbone" and "Connector" Routes, key two-lane and multilane highways that connect Wisconsin communities over 5,000 people. The Corridors 2020 Plan is part of the Wisconsin State Highway Plan adopted in February 2000. As a Connector, US 8 is part of a 2,100-mile (3,380-km) system of two- and four-lane highways connecting key communities and regional economic centers to the Corridors 2020 Backbone Routes. In this role, US 8 serves as a critical link for agricultural, trade, manufacturing and recreational centers.

1.3.1.2 US 8 is a Route of Regional Importance

US 8 provides an essential connection to the surrounding regional urban centers for commerce and services. The two main industries in Polk and Barron Counties are agriculture and manufacturing. The agricultural and dairy industry in Barron County is also one of the highest producers in the State of Wisconsin. Rural farmers and businesses use the route to access local markets, while area industries and businesses use US 8 for product distribution and material receiving. This usage is reflected by the high truck percentage on rural segments of US 8, currently ranging from 9 to 13.7 percent of total traffic.

1.3.1.3 US 8 is a Route of Local Importance

Within the project limits, US 8 links the communities of Range, Village of Turtle Lake, Village of Almena, Poskin, and the City of Barron. US 8 provides mobility to residents, industry, farmers, and businesses within the study area serving as a direct link to the adjacent communities. Local traffic uses US 8 as a primary route to area workplaces, businesses, and shopping centers. A major turkey producer in Barron, adjacent to US 8, employs over 2,000 people in the area. Primarily a two-lane highway, US 8 has four lanes within the Village of Turtle Lake and the City of Barron. In Turtle Lake and Barron, US 8 fulfills a dual function for the commercial establishments along the corridor by providing access and visibility to customers for commercial interests.

While US 8 fills an important local function, it also serves as a main route to most local areas of interest. These activities range from recreational activities associated with the many lakes and rivers in the region to indoor gaming at a casino in Turtle Lake. Some of the larger area lakes include Deer Lake, Upper Turtle Lake, Lower Turtle Lake, and the Joel Flowage. Area trout streams include Toby Creek, Apple River, and Beaver Brook. The Joel Marsh Wildlife Area is also located along the corridor. These attractions draw gaming patrons, sightseers, and sports enthusiasts.

1.3.2 Long-Term Planning and Corridor Preservation

1.3.2.1 Long-Term Planning

Communities on the US 8 corridor are experiencing growth and development pressures. Between 1990 and 2000, the populations of Polk and Barron Counties grew by 18.8 percent and 10.3 percent respectively. Individual communities within the corridor area grew at similar or higher rates during the same period. The following Table shows the growth of the individual communities that are illustrated in Figure 1.3.2.1-1:

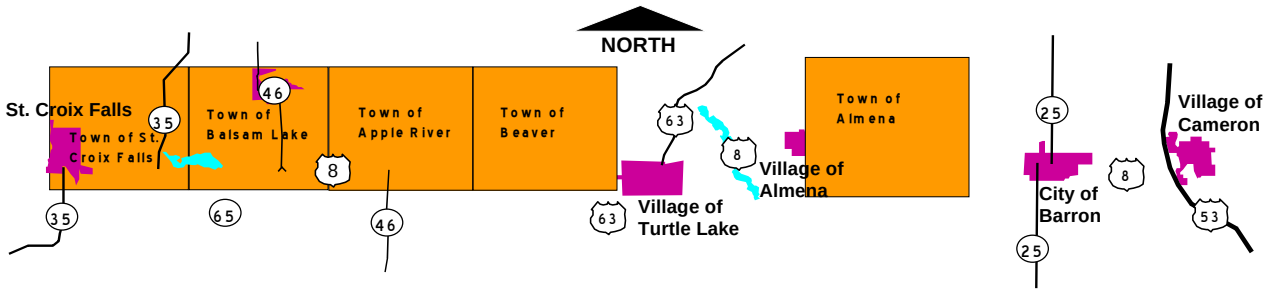

Figure 1.3.2.1-1 US 8 Communities

Community	Percent Growth between 1990-2000
St. Croix Falls	24.0
City of Barron	8.8
Village of Cameron	21.4
Village of Turtle Lake	31.3
Village of Almena	31.3
Town of St. Croix Falls	8.2
Town of Balsam Lake	29.7
Town of Apple River	30.9
Town of Beaver	13.6
Town of Almena	17.7

The growth of adjacent communities have, and will continue to place additional traffic and demand on the US 8 corridor. In its current condition, there are numerous substandard items on the facility, including inadequate stopping sight distance on vertical curves at over 24 locations, horizontal curves with superelevation that exceeds the maximum of six percent, and narrow shoulder widths. These substandard items are not causing immediate operational or safety problems. However, over time the increase in traffic and demand will place additional strain on these substandard items and could create both operational and safety problems. Once this occurs, these deficiencies will need to be corrected. It is essential that long-term planning for the US 8 corridor occur in advance of deficiencies. With the long-term plan in place, incremental improvements can be programmed and constructed as the deficiencies present themselves. This approach will ensure that the US 8 corridor is managed in a manner that is consistent with the long-term plan.

Local communities along the US 8 corridor also have a responsibility to help ensure the success of the long-term plan. Through the 1999-2001 state biennial budget, Wisconsin's Comprehensive Land Use Plan passed legislation that made significant changes to planning-related statutes. The Comprehensive Plan for Wisconsin states that by 2010, every city, village, county, and town (that has adopted village powers) in the state needs to have a comprehensive plan as defined by state statute. The legislation established a grant program for comprehensive planning. Wisconsin statutes focus on the development and implementation of local comprehensive plans and provide a grant program to assist local government in the development of comprehensive plans.

The communities in the US 8 study area are included in this state mandate. None of the US 8 communities have currently satisfied the state mandate, however, steps have been initiated by local communities to do so. The City of Barron has recently led a group of townships and municipalities in Barron County to participate in a comprehensive planning process. These plans are anticpated to be completed in 2007. Polk County has recently completed a land use plan. Polk County's plan indentifies US 8 as a high traffic growth corridor but does not specifically mention any improvements or make any recommendations for US 8.

All area communities along the US 8 corridor will need to meet the state comprehensive planning 2010 deadline. However, the current and future status of the US 8 corridor poses both challenges and opportunities for local planning as its long-term future and location have yet to be finalized. Because of the possible affect US 8 would have on adjacent communities, long-term land use planning needs to consider the future and location of the corridor. The situation is further compounded by the need to maintain mobility through and/or around the city of Barron, Village of Turtle Lake, Range, and Poskin. To maintain mobility in these areas, the exploration of alternative locations and/or bypass corridors will be necessary. Once identified, the preservation of these new corridors must also be pursued. This will help ensure that future growth and development occurs in a manner that does not preclude future options. The location of these corridors would also directly affect economic development such as tax base and rates, industrial and business parks, local roadway systems, utilities and services, and municipal and sewer growth boundaries.

In addition, the existing US 8 corridor (on-alignment) would also need to warrant long-term planning and focus. Access management through the consolidation and/or elimination of driveways, properly spaced intersections, and enhanced local circulation all required proactive planning initiatives. It is essential that both the existing and any new corridors be identified, preserved, and planned for in the near future.

Finally, it is also important that local municipalities work together to initiate both community- and corridor-wide planning efforts to ensure that a common and sustainable vision is developed for the region. Both the EIS and comprehensive planning processes are dependent on each other to ensure land use and transportation relationships are considered. The timing of the US 8 EIS and the 2010 Comprehensive Plan deadline for communities will help establish a collaborative approach for both land use and transportation planning along the US 8 corridor.

1.3.2.2 Long-Term Corridor Preservation

US 8 is designated as a Corridors 2020 Connector Route within the Wisconsin State Highway Plan. Although State Trunk and United States Highways account for only 11 percent of the state's total roadway mileage, they carry 60 percent of all traffic. Because of this, the Wisconsin State Highway Plan places a high priority on the preservation of State Trunk and United States Highways. Since 1982, travel has increased by 60 percent and will continue to increase. However, the State Trunk and United States Highways cannot keep up with increasing traffic. Because much of the highway system is old, efforts to preserve the system must be increased. If US 8 is not preserved (including existing and potential new corridors), future options will be precluded over time, leaving the most costly and higher impact alternatives as the sole option in the long-term.

Corridor preservation is essential for any highway corridor where future needs have been identified and long-term visions have been planned. Once the planning for that future vision has been completed, it is critical that proactive preservation strategies be put in place to allow for that vision to become realized. Without active preservation, the results of the planning phase will not be achieved as local development would likely occur on lands needed for the long-term highway corridor. Failure to identify and preserve a suitable corridor now may result in greater environmental consequences in the future as the ability to create "best-fit" alignments is reduced. The environmental consequences may include impacts to natural resources such as watersheds and their associated wetlands, lakes and streams, public lands, trails, and wildlife habitat. Environmental consequences may also include impacts to historical and archaeological sites and social impacts realized through relocations of homes, farms, and businesses.

Corridor preservation is especially relevant in the case of US 8 and its "tiered" EIS approach. The primary goal of the Tier 1 EIS is to get concurrence on the general location and facility type/function. Funding and construction for the long-term vision of the US 8 corridor is not on the immediate horizon. Because of this, years or perhaps even decades may pass before actual improvements may be realized. The long-term preservation of the US 8 corridor in the interim becomes imperative and is one of the primary purposes of this tiered EIS process and document.

There are four methods that can be used to preserve the US 8 corridor. The four methods are:

1. Expressway/Freeway Designation and Mapping (Wis. Stats. 84.295)
2. Acquisition of Lands (Wis. Stats. 84.09)
3. Locally Adopted Official Map
4. County Adopted Official Map

1. Expressway/Freeway Designation and Mapping (Wis. Stats. 84.295)

Wisconsin State Statutes 84.295 is a long-term planning tool that allows WisDOT to officially designate and preserve highway corridors as expressways/freeways. The tool also allows WisDOT to officially map future improvements to that would be required to plan for such an upgrade. Once a public hearing has been held, WisDOT may establish the freeway/expressway corridor by mapping the location and approximate right-of-way (R/W) necessary. This proactive preservation tool allows WisDOT to address safety, operation, mobility, and capacity issues in advance of impending long-term needs.

One principal benefit of this tool is that it provides certainty to both property owners and local communities as to the location and future R/W needed for expressway/freeway conversion improvements. Improvement footprints would be identified and preserved through Wis. Stats. 84.295 as part of the preferred alternative. Identifying R/W helps minimize costly relocations and/or disruptions to property owners. It also ensures that future land uses and/or developments would not preclude or be incompatible with expressway/freeway conversion improvements.

2. Acquisition of Lands (Wis. Stats. 84.09)

Wisconsin State Statutes 84.09 is a long-term planning and preservation tool allowing WisDOT to acquire by gift, purchase, or condemnation any lands needed for establishing, laying out, widening, enlarging, extending, constructing, reconstructing, or improving and maintaining highways and other transportation related facilities. Under this statute, WisDOT can also limit access to new facilities through the purchase of R/W and access to preserve the function of the facility.

Once the Final Environmental Impact Statement (FEIS) is completed and the Record of Decision (ROD) is published, individual projects may start to be included in the State Transportation Improvement Plan (STIP). Once in the STIP, WisDOT has legal authority to purchase property for those specific projects. Under this scenario, WisDOT purchases the actual R/W necessary for the improvements. This contrasts from the Wis. Stats. 84.295 process whereby R/W is mapped and preserved but not actually purchased.

3. Locally Adopted Official Map[1]

Section 62.23(6)(b) of the Wisconsin State Statutes provides that the common council of any city may establish an official map for the precise designation of R/W lines and site boundaries of streets, highways, parkways, parks, and playgrounds. The map has the force of law and is deemed to be conclusive with respect to the location and width of existing and proposed streets and highways. The official map may be extended to include areas beyond the corporate limits but within the extraterritorial plat approval jurisdiction of the municipality. Villages and towns may also adopt an official map by adopting city planning powers as described in Section 62.23, which outlines Wisconsin's city planning legislation.

The legislation provides that no building permit shall be issued for any building on present or future streets or highways shown on the official map unless it can be shown that the property is not yielding a fair return and the applicant will be substantially damaged by placing a proposed building outside the mapped area.

4. County Adopted Official Map[1]

Section 80.64 the Wisconsin State Statutes confers modified official map powers to counties. County official maps may be used to show the proposed widening of existing streets and highways and to show the location and width of proposed future streets and highways. County maps must have the approval of the governing body of the municipality wherein the mapped streets and highways lie. The county map powers lack two important elements of true official map legislation: (1) no provision is made requiring the property owner to apply for a building permit if a building is proposed to be constructed in a mapped area and (2) the public is not protected from having to pay undue damages to a property owner who builds in a mapped area.

Locally-adopted official maps are preferable to county-adopted official maps since they provide the most protection for highway R/W. Because of the limited resources of the rural communities on the US 8 corridor, it may be beneficial for the county governments to act as the lead official mapping agencies. The counties could provide the technical assistance to the municipalities to ensure that an official map is locally adopted. Alternatively, the counties could adopt a county-level official map but this option should be the option of last resort because of the limitations of this approach outlined earlier**.**

1.3.3 Traffic Capacity and Level of Service

Projected traffic volumes for US 8 indicate that capacity improvements will be needed over much of the corridor in order for the highway to operate at the expected level. Capacity analyses were conducted for US 8 to determine how existing and future traffic demands are satisfied by the existing highway facility. Capacity is affected by a highway's traffic volumes, composition of the traffic, and the geometric layout of the roadway. Analysis results provide a Level of Service (LOS) as an indicator of how the roadway operates under the given conditions. Levels range from "A" to "F" in order of decreasing quality. Levels "A" and "B" are considered not congested and are the most desirable. Level "C" provides for stable operations with minimal congestion. Levels "D" through "F" have moderate to extreme congestion and are considered poor. Typically on Corridors 2020 routes, only minimal congestion (LOS C) is allowed. Table 1.3.3.-1 shows level of services characteristics.

Level of Service	Characteristics
A	Highest quality of service where motorists are able to drive at their desired speed. Average speeds approach 55 mph and passing demand is well below passing capacity. Platoons of more than three vehicles almost never occur.
B	Average travel speeds are around 50 mph, yet passing demand required to maintain these speeds approximately equals the passing capacity. Motorists are delayed up to 50 percent of the time.
C	Average speeds still exceed 45 mph on level terrain; however, passing demand exceeds passing opportunities. There are noticeable increases in platoon size, formation, and frequency. Drivers are delayed up to 65 percent of the time on average.
D	Unstable traffic flow is approached. The two opposing travel directions essentially operate independently. Passing becomes extremely difficult. Mean platoon sizes ranging from five to ten vehicles are common. Turning vehicles and/or roadside distractions cause major shock waves in the traffic stream. Drivers are delayed up to 80 percent of the time.
E	Under ideal conditions, travel speeds drop below 40 mph and can drop as low as 25 mph. Platooning becomes intense when slower vehicles or other interruptions are encountered.
F	Heavily congested flow with traffic demands exceeds capacity. Traffic flow breaks down resulting in service flow rate of less than capacity.

Table 1.3.3-1 Level of Services Characteristics from 2000 HCM

[1] Adapted from the Southeastern Wisconsin Regional Planning Commission's *Official Mapping Guide*

WisDOT's Facility Development Manual (FDM) indicates that a Corridors 2020 Connector route rural two-lane roadway will generally fail to meet LOS C when average daily traffic (ADT) volumes reach approximately 8,700 (for a facility with 12-foot lanes and 10 percent trucks). When LOS C is desired, the 8,700 ADT is considered the threshold when the roadway needs capacity improvements. WisDOT can accept a reduced LOS when the use of passing lanes is found to be an adequate treatment for the facility. When passing lanes are used and a reduced LOS is acceptable, the threshold for capacity improvements can be increased to approximately 12,000 ADT.

For four-lane urban roadways that are Corridors 2020 Connector routes, the point at which LOS C can no longer be met depends on the posted speed, roadway characteristics and ADT. For posted speeds of 40 mph (64 km/hr) or less, the FDM states the threshold where the roadway can no longer provide a LOS C can be, at worst case, 16,000 ADT. If roadway characteristics are optimized it is possible to provide a LOS C with traffic volumes up to 36,000 ADT (best case). When posted speeds are 45 mph (72km/hr) or higher, the threshold can be as low as 13,500 ADT (worst case) or up to 33,000 ADT (best case). At the 45 mph (72km/hr) or higher posted speed, standards require the four-lane urban roadway have a 30-foot (9.1 m) median.

1.3.3.1 Existing and Future Traffic Volumes

Figure 1.3.3.1-1 shows the existing and future traffic volumes along the study corridor. The existing roadway carries between 6,300 and 10,950 ADT in rural areas. When US 8 passes through the Village of Turtle Lake and City of Barron traffic volumes increase to 12,200 and 13,900 ADT, respectively. Within the Village of Turtle Lake, US 8 and WIS 63 are coincident for 1.3 miles (2.1 km). Traffic volumes along WIS 63 are about 4,000 to 4,500 ADT near the Village of Turtle Lake. The increase in traffic volumes along US 8 within the Village of Turtle Lake can be attributed to regional traffic passing through Turtle Lake and local traffic destinations, including the St. Croix casino. US 8 and WIS 25 in Barron are coincident for approximately 0.4 miles (0.6 km). The increase in traffic volumes within Barron compared with the adjacent rural area can be attributed to both regional trips (WIS 25 traffic) and local inter-city trips.

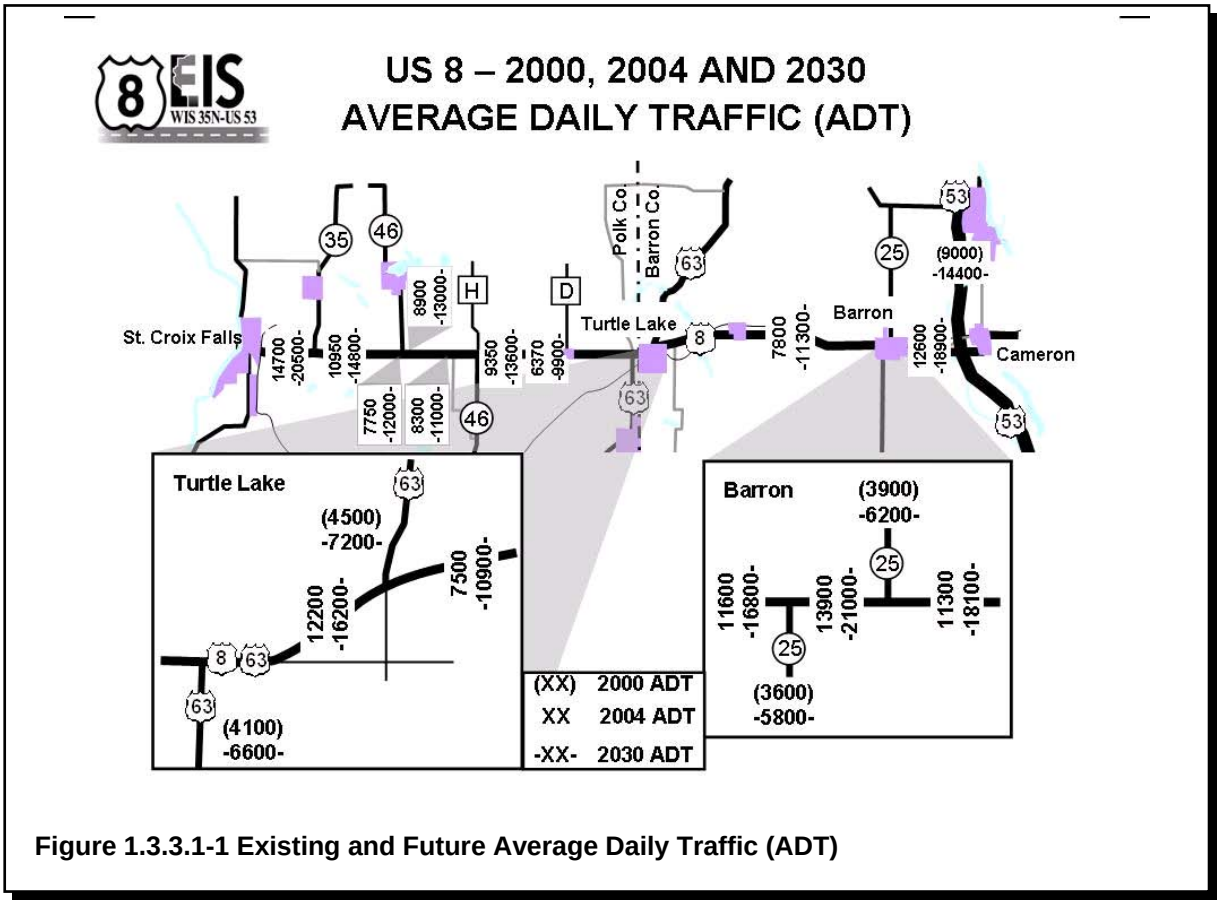

Figure 1.3.3.1-1 Existing and Future Average Daily Traffic (ADT)

The Traffic Forecasting Section of WisDOT's Bureau of State Highway Programs projected future traffic volumes for the year 2030 along the study corridor based on 2000 and 2004 count data. The traffic projections are based on growth over time because of anticipated regional growth, changes in demographics, and economic factors. This type of forecast is generally referred to as normal traffic growth and is largely based on historic trends. Normal traffic growth assumes that the highway corridor area will continue to have rates of growth and development similar to those experienced in the past.

The traffic forecast is based on a conservative, linear growth of approximately 2 percent per year along the corridor. According to the Traffic Forecasting Section, the forecast assumes no substantial new traffic generators will be developed in the area for the foreseeable future. The 2030 forecast shows an average of 45 percent higher ADT along the rural portions of the study corridor than current traffic volumes. Traffic volumes in 2030 will range from 9,900 to 14,800 ADT. All rural sections will exceed the 8,700 ADT level for capacity improvements of rural two-lane highways. If passing lanes are considered and the 12,000 ADT level for capacity improvements of rural two-lane highways is used, approximately 11 miles (17.6 km) of the western portion of the study corridor would exceed the threshold that indicates capacity improvements are needed. For the urban sections in the Village of Turtle Lake and City of Barron, 2030 volumes are projected to be 16,200 and 21,000 ADT, respectively. Both urban locations have future traffic volumes that are in the range where LOS C may not be achieved.

1.3.3.2 Level of Service

Roadway LOS is an indicator of a highway's response to the traffic demands placed on it. The LOS rating system describes the traffic flow conditions, or congestion, of a roadway or intersection and ranges from A (free flow condition) to F (over capacity) as described earlier in Table 1.3.3.-1. This study looked at operations for both two-lane and four-lane roadways and intersections.

Traffic levels vary throughout the day on US 8 with the highest traffic volumes occurring during the morning and evening peak hours. This study looked at the LOS for the peak hour of the day. A two-lane analysis was performed for the US 8 mainline in areas that have one lane in each direction and which may also have existing passing lanes. An urban arterial analysis was performed through the Village of Turtle Lake and City of Barron where the roadway has two lanes in each direction.

Based on varying cross sections along the project corridor, the study separated the US 8 corridor into sub-sections for analysis purposes using the Highway Capacity Software (HCS). Figure 1.3.3.2-1 shows each of these segments.

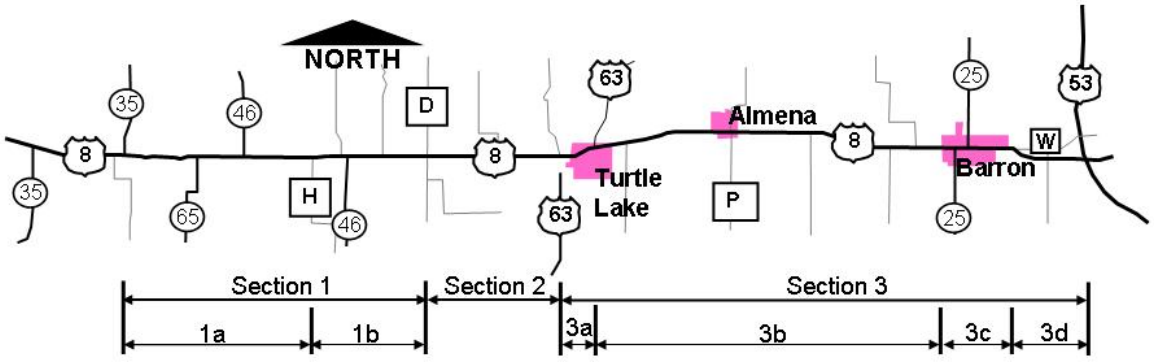

Figure 1.3.3.2-1 Two-lane Analysis Sections

All sections are two-lane roadways, unless otherwise noted.

- Section 1a: WIS 35 (N) to County H (N)
- Section 1b: County H (N) to County D
  Section 2: County D to US 63 (S)/County T
- Section 3a: US 63 (S)/County T to US 63 (N) (four-lane section through the Village of Turtle Lake)
- Section 3b: US 63 (N) to Barron
- Section 3c: Barron to County W (four-lane section through the City of Barron)
- Section 3d: County W to US 53

A. Two-Lane

The study looked at sections 1, 2, and 3b using the HCS two-lane, two-way analysis. For rural roadways, LOS addresses both mobility and accessibility concerns. Traffic factors that affect LOS include ADT volumes, peak-hour volumes, truck percentages, lane and shoulder widths, vertical grades, passing opportunities, and number of access points. Between 2000 and 2003, WisDOT constructed passing lanes at six rural locations along the project corridor to supplement the three passing lane locations already existing between WIS 35 (N) and 1 mile (1.6 km) east of WIS 46 (N). The nine existing passing lane locations are shown in Figure 1.3.3.2-2. In the two-lane analysis, the effects of passing lanes within segments 1, 2, and 3b were taken into account.

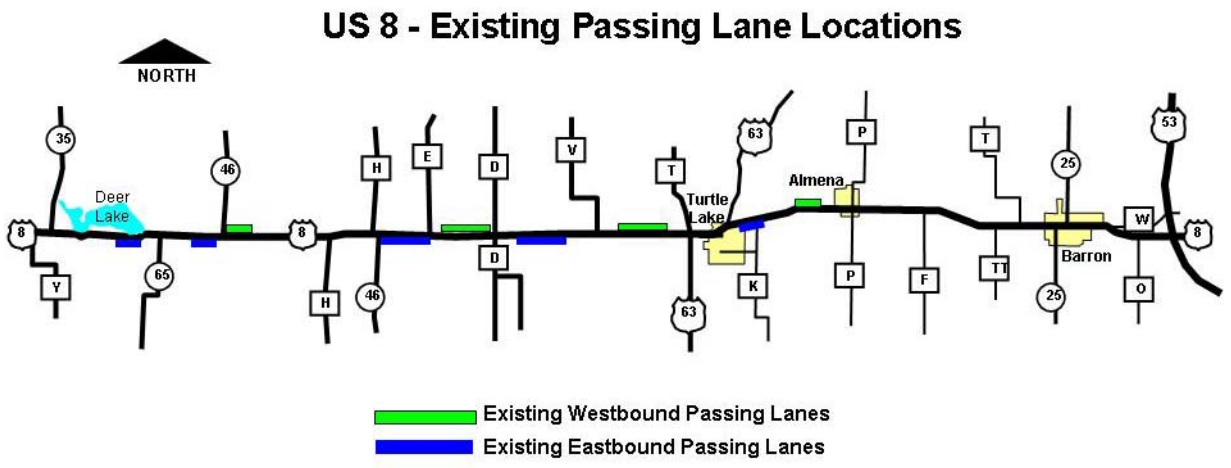

Figure 1.3.3.2-2 Existing Passing Lanes Along Project Corridor

Table 1.3.3.2-2 shows the existing and forecasted LOS for the two-lane segments of the US 8 corridor. The analysis indicates that some portions of the existing corridor operate at acceptable LOS while others do not. As traffic increases, passing opportunities decrease and as a result, roadway operations deteriorate to unacceptable levels. According to WisDOT, the forecasted LOS on Corridor 2020 Connector Routes should typically be at least LOS C.

US 8 EXISTING AND FORECASTED LEVEL OF SERVICES FOR TWO-LANE ROADWAY

Section	Limits	Existing LOS (2001 or 2004)	Future LOS (2030)
1a	WIS 35 (N) - County H (N)	D	E
1b	County H (N) - County D	D	D
2	County D - US 63 South	C	D
3b	US 63 (N) - Barron	D	E

Table 1.3.3.2-2 Two-Lane Analysis

Table 1.3.3.2-2 indicates that as traffic increases, mobility along the corridor decreases and LOS drops below a LOS C on all two-lane segments along the project. The decrease in LOS is attributable to the increase in traffic and decrease in roadway capacity. However, because the calculations that derive LOS may not account fully for the benefits of passing lanes, WisDOT may find a future LOS lower than LOS C acceptable if passing lanes are present.

B. Four-lane

The study looked at Section 3a through the Village of Turtle Lake using the HCS Multilane Analysis and Section 3c through the City of Barron using the HCS Arterials Analysis. For four-lane facilities, LOS is based on the average through-vehicle travel speed for the urban street segment. These urban segments operate at lower posted speeds through these moderately populated areas. The travel speed along the section of urban roadway is dependent on the running speed between signalized intersections and the amount of delay incurred at signalized intersections.

Currently, the four-lane roadways through the Village of Turtle Lake and the City of Barron operate at LOS B. With no improvements (capacity or operational) in 2030, the four-lane facility through Turtle Lake continues to operate at LOS B while the LOS in Barron decreases to LOS C. Table 1.3.3.2-3 summarizes the four-lane LOS for these two communities.

US 8 EXISTING AND FORECASTED LEVEL OF SERVICES FOR FOUR-LANE ROADWAY

Section	Limits	Existing LOS (2001)	Future LOS (2030)
3a	US 63 (S) to US 63 (N) (Through Turtle Lake)	B	B
3c	Barron to County W (Through Barron)	B	C

Table 1.3.3.2-3 Urban Arterial Analysis

The four-lane roadways operate at adequate LOS in 2001 and 2030 because Turtle Lake does not have any signalized intersections and Barron has just one signalized intersection. Signalized intersections introduce delay to mainline traffic and, therefore, decreases travel speed. The potential condition of one traffic signal in Turtle Lake was reviewed as if it were an existing condition. There was no change in LOS. With one traffic signal in Turtle Lake the roadway would operate at LOS B.

Although US 8 mainline operates at LOS B in Turtle Lake in 2030 and at LOS C in Barron in 2030, stop-controlled side streets experience substantial delay and operate poorly. Intersection operations are described in the next section.

C. Intersections

For intersections, LOS is determined by the average delay (in seconds) of all vehicles entering the intersection. The average delay is based on the peak 15-minute period of the peak hour being analyzed. Since the delay is an average value, some vehicles will experience substantially greater delay, and some will experience less delay than the average value. Intersections with short average delays have high LOS; conversely, intersections with long average delays have low LOS.

LOS characteristics are different for signalized and unsignalized intersections. Drivers anticipate longer delays at signalized intersections that carry large amounts of traffic. However, drivers generally feel unsignalized intersections should have less delay. Additionally, several driver behavior considerations combine to make delays at unsignalized intersections less desirable than at signalized intersections. Table 1.3.3.2-4 describes LOS characteristics for both signalized and unsignalized intersections from the 2000 Highway Capacity Manual (HCM).

LOS	Signalized Intersections	Unsignalized Intersections
A	Describes intersections with very low levels of delay that average less than 10 seconds per vehicle. This condition occurs with extremely favorable signal progression and most vehicles arrive on the green phase of the signal.	Describes intersections with very low levels of delay that average less than 10 seconds per vehicle.
B	Describes intersections with low levels of delay that are more than 10 seconds yet less than 20 seconds per vehicle. This condition generally occurs with short-cycle lengths and/or good signal progression.	Describes intersections with low levels of delay that are more than 10 seconds yet less than 15 seconds per vehicle.
C	Describes intersections with average delays ranging from 20 to 35 seconds per vehicle. Individual cycle failures (waiting through more than one cycle) may appear at this Level of Service. The number of vehicles stopping is also substantial at this Level of Service.	Describes intersections with average delays ranging from 15 to 25 seconds per vehicle.
D	Describes intersections with average delays ranging from 35 to 55 seconds per vehicle. The influence of congestion becomes more noticeable. This Level of Service may result from long-cycle lengths, unfavorable progression and/or high vehicle-to-capacity ratios. Many vehicles stop and the proportion of nonstopping vehicles declines. Individual cycle failures are noticeable.	Describes intersections with average delays ranging from 25 to 35 seconds per vehicle. The influence of congestion becomes more noticeable.
E	Describes intersections with average delays ranging from 55 to 80 seconds per vehicle. Individual cycle failures are frequent occurrences. This Level of Service is considered by most agencies to be the limit of acceptable delay.	Describes intersections with average delays ranging from 35 to 50 seconds per vehicle.
F	Describes intersections with average delays that are more than 80 seconds per vehicle. This Level of Service, considered to be unacceptable by most drivers, often occurs with over-saturation. The number of vehicles entering the intersection exceeds the intersection's capacity.	Describes intersections with average delays that are more than 50 seconds per vehicle. LOS F exists where there are insufficient gaps of suitable size to allow side-street traffic to cross safely though a major street traffic stream. This LOS is usually evident from extremely long total delays experienced by side-street traffic and queuing on the minor approaches.

Table 1.3.3.2-4 Level of Services Characteristics from 2000 HCM

The study looked at evening peak hour LOS at 14 at-grade intersections (11 rural and 3 urban intersections) along the corridor (see Figures 1.3.3.2-3 and 1.3.3.2-4).

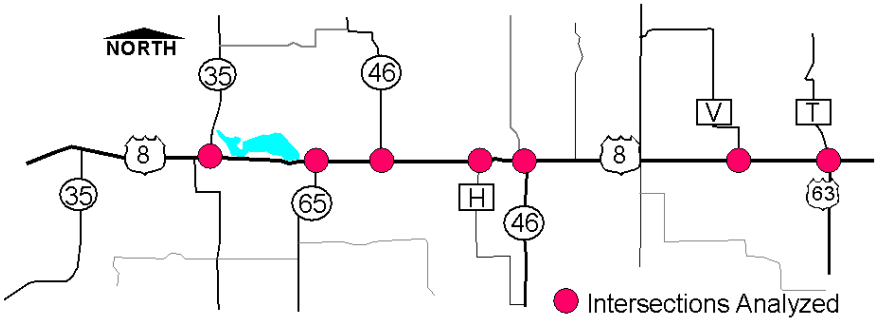

Figure 1.3.3.2-3 Polk County Intersections Analyzed

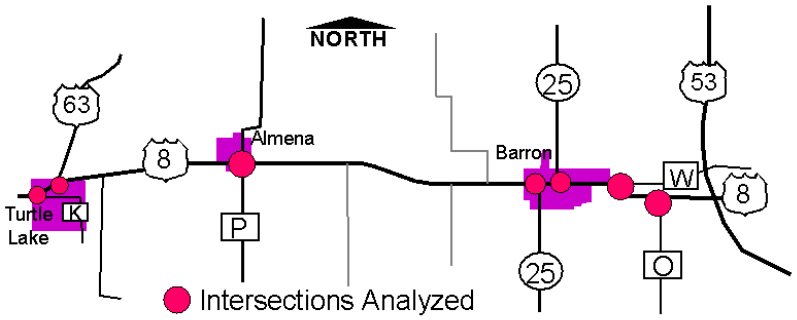

Figure 1.3.3.2-4 Barron County Intersections Analyzed

Intersection analysis was done for both summer and fall traffic volumes. The fall traffic volumes are used as a basis for comparison, and the summer volumes are used to account for the additional tourist traffic that occurs during the summer months. Summer traffic volumes at these intersections were approximately 5 to 10 percent higher than fall traffic volumes.

In Polk County, intersection analyses using existing traffic volumes showed that six of the seven intersections operate at acceptable LOS A, B, or C during both the summer and fall months. The WIS 35 (N) intersection, however, experiences operational problems on the north and south (a driveway) approaches with LOS E and F, respectively, during both the summer and fall months. Future traffic volumes for the 2030 design year, analysis showed that with increased traffic, the WIS 35 (N) intersection continues to experience operational problems. Also, the WIS 65 (S), WIS 46 (S), and US 63 (S) intersections begin to experience operational problems. At these intersections, while US 8 operates at LOS A and B, the side road traffic experiences LOS E and F with substantial delays because of increased traffic and fewer gaps on the mainline.[2] This indicates that as traffic volumes increase, drivers will experience more delay at the at-grade intersections.

In Barron County, intersections analyzed using existing traffic volumes showed that all of the seven intersections studied operate at acceptable LOS A, B, or C during both the summer and fall months. In 2030, five out of the seven intersections begin to experience operational problems. Similar to the Polk County intersections, US 8 operates at LOS A and B[3] while the side-street traffic at the unsignalized intersections analyzed operate at LOS E and F. Side-street traffic experiences large delays because of increased traffic and fewer gaps on the mainline. The County W and WIS 25 (N) intersections operate at acceptable LOS C in 2030. See Table 1.3.3.2-5 for future LOS at each of the intersections analyzed.

[2] Note : There is a discrepancy between mainline LOS in the two-lane and intersection analyses. The discrepancy occurs because the methodology in determining two-lane LOS is different than the methodology in determining intersection LOS. Intersection LOS is determined by the amount of measured control delay at a single intersection, and two-lane LOS is determined by percent time-spent-following and average travel speed along a stretch of roadway. All intersections under study are two-way stop-controlled, and therefore, US 8 does not experience any delay through the intersection, resulting in LOS A or B. However, the two-lane analysis takes into account other factors (ADT, shoulder widths, passing opportunities, access points) that the intersection analysis does not. Taking into account these factors, two-lane analysis shows that US 8 will operate at LOS D and E.

3 Ibid.

Intersection	Section	2030 US 8 Mainline LOS	2030 Side Street LOS
WIS 35 (N)	1a	E[1]	D(35)[2]
WIS 65 (S)	1a	E[1]	F[2]
WIS 46 (N)	1a	E[1]	D[2]
County H (S)	1b	D[1]	C[2]
WIS 46 (S)	1b	D[1]	F[2]
County V	2	D[1]	C[2]
US 63 (S)	2	D[1]	C(63) [2]
County K	3a	B[4]	F[2]
US 63 (N)	3a	B[4]	C[2]
County P	3b	D[1]	E[2]
WIS 25 (S)	3c	A[4]	D[2]
WIS 25 (N) (signalized)	3c	B[3]	C[3]
County W	3d	C[5]	C[2]
County O	3d	C[5]	F[2]

[1] Based on HCS Two-lane Highway Segment Analysis
[2] Based on HCS Unsignalized Analysis for Two-way Stop Control
[3] Based on HCS Signalized Intersection Analysis
[4] Based on HCS Urban Arterial Analysis
[5] Based on HCS Multi-lane Highway Analysis

Because most intersections on US 8 are two-way stop controlled, movements to and from the side road legs are the only movements that experience delay. The US 8 mainline movements are freeflow and technically do not experience intersection delay. For this reason, this table shows the side road LOS intersection delay for yielding movements, and the US 8 corridor LOS based on a corridor analysis (non-intersection.)

Table 1.3.3.2-5 2030 Intersection and Mainline LOS

1.3.4 Existing Highway Characteristics and Substandard Items

The available as-built road plans for the corridor, WisDOT's US 8 Photo Log, and the State Trunk Highway Log Mile format were used to help define existing highway characteristics such as typical sections, existing posted speeds, and to estimate the location of substandard geometric items. For purposes of analysis, the existing corridor is divided into segments. The segments are characterized as urban whenever the highway route travels through a community and posted speeds are lowered to indicate changed conditions. This is the case in smaller communities like Range and Poskin where curb and gutter is not present but posted speeds are lower than the rural 55 mph (88 km/h). The Table 1.3.4-1 identifies the segments, their respective lengths and posted speeds.

Segment	Limits/Total Segment Length (km)	Log Mile Limits for Posted Speed	Posted Speed Mph (km/h)	Length Miles (km)	Existing Segment Classification
A1	200th Street to 70th Street 13.0 mi (20.8 km)	3.96 – 16.98	55 (88)	13.0 (20.8)	Rural
A2	70th Street to 50th Street 2.2 mi (3.5 km)	16.98 – 17.68	55 (88)	0.7 (1.1)	Urban (Range)
		17.68 – 18.01	45 (72)	0.3 (0.5)	
		18.01 – 19.18	55 (88)	1.2 (1.9)	
A3	50th Street to County T 4.5 mi (7.3 km)	19.18 – 23.56	55 (88)	4.4 (7.0)	Rural (Almena)
		23.56 – 23.73	45 (72)	0.2 (0.3)	
A4	County T to County KK 2.6 mi (4.2 km)	23.73 – 24.13	45 (72)	0.4 (0.6)	Urban (Turtle Lake)
		24.13 – 25.04	35 (56)	0.9 (1.4)	
		25.04 – 26.36	55 (88)	1.3 (2.1)	
B1	County KK to 8th Street 6.0 mi (9.6 km)	26.36 – 30.10	55 (88)	3.7 (6.0)	Rural
		30.10 – 30.49	45 (72)	0.4 (0.6)	
		30.49 – 32.38	55 (88)	1.9 (3.0)	
B2	8th Street to 10th Street 2.0 mi (3.2 m)	32.38 – 33.61	55 (88)	1.2 (2.0)	Urban (Poskin)
		33.61 – 34.04	35 (56)	0.4 (0.7)	
		34.04 – 34.41	55 (88)	0.4 (0.7)	
B3	10th Street to County T 3.1 mi (4.9 km)	34.41 – 37.48	55 (88)	3.1 (4.9)	Rural
B4	County T to 17th Street 4.0 mi (6.4 km)	37.48 – 40.39	35 (56)	2.9 (4.6)	Urban (Barron)
		40.39 – 40.71	45 (72)	0.3 (0.5)	
		40.71 – 41.50	55 (88)	0.8 (1.3)	
B5	17th Street (near County W) to 19th Street 2.1 mi (3.4 km)	41.50 – 43.62	55 (88)	2.1 (3.4)	Rural

Table 1.3.4-1 Posted Speeds in Existing Rural and Urban Segments

Ninety percent of the 40-mile (64 km) corridor is typically a rural two-lane roadway with 12-foot (3.6 m) lanes and 10-foot (3.0 m) shoulders. The cross section varies occasionally because of nine passing lane locations and median lanes developed at intersections with WIS 35 (N), US 63 (S), US 63 (N), and County W. along the project corridor. The sections that have passing lanes (both eastbound and westbound) consist of three 12-foot (3.6 m) lanes with no median. The cross section at the beginning of the project just west of WIS 35 (N) has four 12-foot (3.6 m) lanes and a 14-foot (4.3 m) two-way-left-turn-lane (TWLTL). Where US 8 passes through the communities of Range, Almena and Poskin, the typical section remains rural in nature with gravel shoulders and no curb and gutter. The posted speed is lower to reflect changed conditions. Within the Village of Turtle Lake and the City of Barron the cross section consists of four 12-foot (3.6 m) lanes with curb and gutter. Table 1.3.4.1-1 shows the typical section characteristics by location, number of lanes, and widths along the corridor.

US 8 Roadway Cross Sections

Beginning at Log Mile/Cross Street	Number of Lanes and Widths			Shoulder
	Westbound	Eastbound	Center Turn Lane	
3.96 200th St	2-12'	2-12'	14'	10', 3' Paved
4.61	1-12'	2-12'	10'	10', 3' Paved
4.89	1-12'	1-12'	0	10', 3' Paved
6.67	1-12'	2-12'	0	10', 3' Paved RT, 10' LT
7.60	1-12'	1-12'	0	10', 3' Paved
9.14	1-12'	2-12'	0	10', 3' Paved RT, 10' LT
10.16 WIS 46 N	2-12'	1-12'	0	10' RT,10', 3' Paved LT
11.21	1-12'	1-12'	0	10', 3' Paved
14.05 WIS 46 S	1-12'	1-12'	0'-22'	10', 3' Paved
14.66	1-12'	1-12'	0	10', 3' Paved
23.44 County T	2-12'	1-12'	22'	10', 8' Paved
23.91	2-12'	2-12'	22'	10', 8' Paved
24.22 County K	2-12'	2-12'	0	Curb & Gutter
24.80	2-12'	2-12'	22'	10', 8' Paved
25.00	1-12'	1-12'	0	10', 3' Paved
38.39 WIS 25 S	2-12'	2-12'	0	Curb & Gutter
40.39	2-12'	2-12'	0	3', 3' Paved
40.94	2-12'	2-12'	0'-22'	3', 1' Paved
41.36 County W	1-12'	1-12'	0	10', 3' Paved RT, 10' Paved LT
43.41	2-12'	2-12'	84'	10', 8' Paved

Table 1.3.4-2 Existing US 8 Roadway Cross Sections

1.3.4.1 Horizontal Geometrics

The WisDOT Facilities Development Manual (FDM) sets criteria for how sharp a curve can be for a particular posted speed. All the curves along the corridor meet or exceed the criteria for the 55 mph (90 km/hr) posted speed. Superelevation of the roadway is also considered. Superelevation can be defined as the slope of travel lanes that counteracts centrifugal forces and increases driver comfort as a vehicle travels along a curve. At the east end of the project corridor between County W and County O there are curves that exceed the maximum standard for superelevation.

The areas of highest concern include driveways spaced, on average, less than 300 feet (91 m) apart. These areas are located in Barron from just east of WIS 25 (S) to 16th Street eastbound (2 miles [3.2 km]) and from 15th Street to North Wye St. westbound (2 miles [3.2 km]). Locations that have driveways spaced, on average, less than 500 feet apart include eastbound US 8 in Barron from 16th Street to 17th Street, eastbound and westbound in Range from about 70th Street to County D, westbound in Poskin from 10th Street to 8 3/4 Street, and westbound near Deer Lake from Sunset View Drive to Deer Lake Park.

Purchasing access rights as part of a highway improvement project is an access management tool WisDOT has used on US 8. In Polk County, WisDOT has access control for approximately 10 miles (16 km) by either limiting the number of access points per parcel or by purchase of all access rights to a parcel along US 8. In Barron County, about 7.7 miles (12.3 km) of US 8 has access rights controlled. In all, approximately 45 percent of the corridor is access controlled. There are also a number of isolated intersections with limited access controls for vision corners.

Until 2004, WisDOT was able to use the Wisconsin Administrative Code TRANS 233 process to review proposed developments adjacent to state trunk highways and accept or reject proposed access. Since the legislature rescinded TRANS 233 in 2004, driveway permitting is the only active access control tool WisDOT has available. WisDOT's driveway permit process examines each new driveway request on a case-by-case basis. It is anticipated that as traffic volumes and development pressures grow over time, requests for additional access points will increase wherever access controls allow. The existing substandard items related to access will become a deficient condition as increasing conflict points compromise safety.

1.3.5 Crashes

Crashes along US 8 were evaluated for the five-year period between 1996 and 2000. For the analysis, the corridor was divided into the same segments discussed in Section 1.3.4 used to categorize existing typical sections based on existing urban or rural characteristics. Figure 1.3.5-1 shows these segments. A summary of the crashes that occurred on US 8 between 1996 and 2000 is shown in Table 1.3.5-1. The type of crashes and frequency are illustrated in Figure 1.3.5-2. Approximately 32 percent of crashes were recorded as object/no collision crashes. Object/no collision crashes are crashes that do not involve another motor vehicle. This type of crash involves vehicles colliding with objects that include pedestrians, vehicle fires, vehicle rollovers, or vehicles leaving the roadway without the involvement of a second vehicle as shown in Figure 1.3.5-3. Almost 33 percent of these crashes involve a vehicle colliding with a deer and 21 percent of these crashes involve a single vehicle overturning. In Figure 1.3.5-3, a culvert, a fence, a light pole, a mailbox, a tree, and a utility pole represent a few of the crash types in the all other objects category.

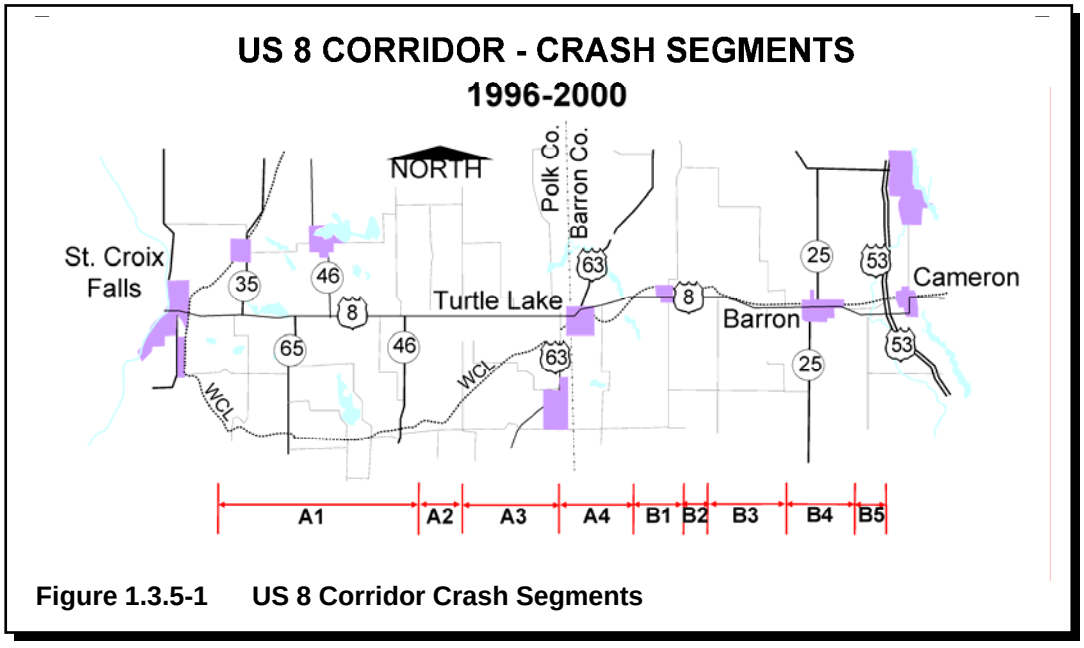

Figure 1.3.5-1 US 8 Corridor Crash Segments

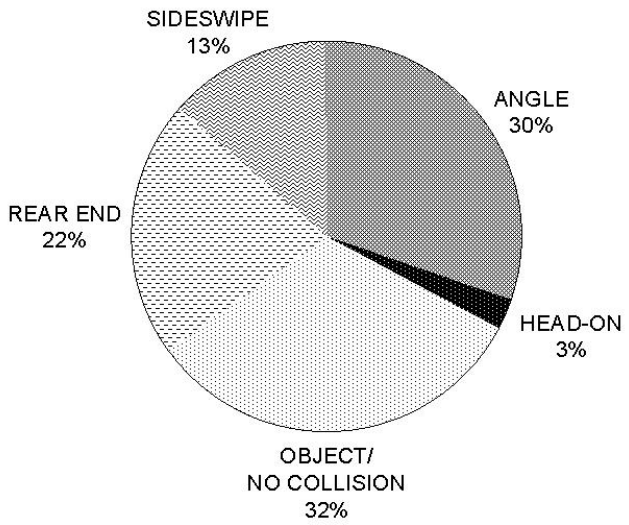

Figure 1.3.5-2 Manner of Collision–US 8 Corridor

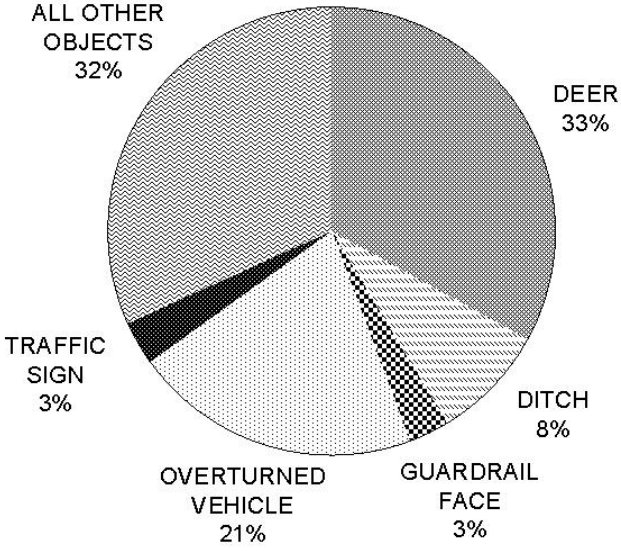

Figure 1.3.5-3 Object/No Collision (Crashes Without Another Vehicle)

Table 1.3.5-1

US 8 Crashes–1996 to 2000

Segment	Segment Length (miles)	ADT	Type	1996	1997	1998	1999	2000	Total	Segment Total Crashes	Average Yearly Total Crash Rate per Segment	Combined Segments (Average Yearly Total Crash Rate)	Average Yearly Fatal Crash Rate per Segment	Combined Segments (Average Fatal Crash Rate)
A1	13.02	7684	Property	35	16	22	28	19	120	180	99	95	4	3
			Injury	16	10	12	7	8	53					
			Fatality	0	1	1	2	3	7					
A2	2.2	6751	Property	1	2	2	0	2	7	16	59		0	
			Injury	2	4	1	1	1	9					
			Fatality	0	0	0	0	0	0					
A3	4.55	6200	Property	10	5	5	3	2	25	39	76		2	
			Injury	1	3	2	2	5	13					
			Fatality	0	0	1	0	0	1					
A4	2.63	7950	Property	21	12	13	10	5	61	103	270	270	0	0
			Injury	15	6	11	6	4	42					
			Fatality	0	0	0	0	0	0					
B1	6.02	5202	Property	14	10	2	4	3	33	59	103	92	2	2
			Injury	8	3	2	5	7	25					
			Fatality	0	0	0	1	0	1					
B2	2.03	6000	Property	5	4	4	2	6	21	31	139		0	
			Injury	0	0	4	4	2	10					
			Fatality	0	0	0	0	0	0					
B3	3.07	7000	Property	4	1	1	1	4	11	23	59		3	
			Injury	2	3	3	0	3	11					
			Fatality	1	0	0	0	0	1					
B4	4.02	10500	Property	42	36	28	43	24	173	275	357	357	1	1
			Injury	22	22	18	21	18	101					
			Fatality	0	0	0	1	0	1					
B5	2.12	7800	Property	6	3	2	3	2	16	23	76	76	7	7
			Injury	3	0	0	1	1	5					
			Fatality	1	0	0	0	1	2					
			TOTAL	**209**	**141**	**134**	**145**	**120**	**749**					

The resultant crash rates[4] in each sub-section of US 8 are compared with average statewide crash rates in Table 1.3.5-2. Approximate crash locations were plotted to determine potential high crash locations. The urban area of Turtle Lake (Segment A4) experienced higher than average crash rates for similar roadways in two of the five years analyzed. In Barron (Segment B4), four of the five years showed higher than average crash rates. Within the same 5-year period, all of the rural areas experienced crash rates lower than the statewide average for similar roadways. Although Segment A1's crash rate does not exceed the statewide average for rural roadways, the crashes in Segment A1 could potentially be attributed to the more numerous instances of substandard stopping sight distance in this section.

Crash Rates per 100 Million Vehicle Miles						
	Year					
Segment	**1996**	**1997**	**1998**	**1999**	**2000**	**1996-2000**
Segment A1 (Rural)	140	74	35	101	82	99
Segment A2 (Urban)	55	111	55	18	55	59
Segment A3 (Rural)	107	78	78	49	68	76
Segment A4 (Urban)	**472**	236	**314**	210	118	270
Segment B1 (Rural)	192	114	35	87	87	103
Segment B2 (Urban)	112	90	180	135	180	139
Segment B3 (Rural)	89	51	51	13	89	59
Segment B4 (Urban)	**415**	**376**	**299**	**422**	273	**357**
Segment B5 (Rural)	166	50	33	66	66	76
Wisconsin Statewide Average Crash Rates						
Rural STH	195	181	169	177	176	180
Urban Streets	355	313	293	295	322	316

Table 1.3.5-2 US 8 Crash Rates between 1996 and 2000 (Crashes per 100 MVM)

	Total Fatal Crashes per Year per Segment							
	Year							
Segment	**1996**	**1997**	**1998**	**1999**	**2000**	**Total Number of Fatal Crashes**	**1996-2000 Average Fatal Crash Rate**	**1996-2000 Statewide Average Fatal Crash Rate**
Segment A1 (Rural)	0	1	1	2	3	**7**	3.8	1.8
Segment A2 (Urban)	0	0	0	0	0	**0**	0.0	0.6
Segment A3 (Rural)	0	0	1	0	0	**1**	1.8	1.8
Segment A4 (Urban)	0	0	0	0	0	**0**	0.0	0.6
Segment B1 (Rural)	0	0	0	1	0	**1**	1.7	1.8
Segment B2 (Urban)	0	0	0	0	0	**0**	0.0	0.6
Segment B3 (Rural)	1	0	0	0	0	**1**	2.5	1.8
Segment B4 (Urban)	0	0	0	1	0	**1**	1.3	0.6
Segment B5 (Rural)	1	0	0	0	1	**2**	6.6	1.8

Table 1.3.5-3 US 8 Total Fatal Crashes and Average Crash Rates Between 1996 and 2000

[4] Intersection crash rate (Crashes per million entering vehicles) = (Total Crashes/in years) x 1,000,000/(ADT x365)

Thirty percent of all crashes along the US 8 corridor were angle crashes. Seventy percent of these angle crashes occurred in the Village of Turtle Lake and City of Barron. Factors that contribute to higher angle crashes in these two urban areas include insufficient gaps for side-street traffic to enter the traffic stream and a high number of access points, particularly within the City of Barron. Within the City of Barron, there is an average of 27 driveways per mile compared to the other segments that average between 5 and 15access points per mile. The insufficient gaps and high number of access points in Turtle Lake and Barron likely contribute to the higher crash rates within these two communities.

Twenty-two percent of all crashes along the US 8 corridor were rear-end crashes. Forty percent of these rear-end crashes occurred in the Village of Turtle Lake and City of Barron. One factor that contributes to these rear-end crashes in these two urban areas is the lack of turn lanes within each of the communities. Within the City of Barron, the lack of turn lanes and the high number of access points combine to contribute to a high crash rate in this area. Figure 1.3.5-4 illustrates the high number of crashes in the City of Barron.

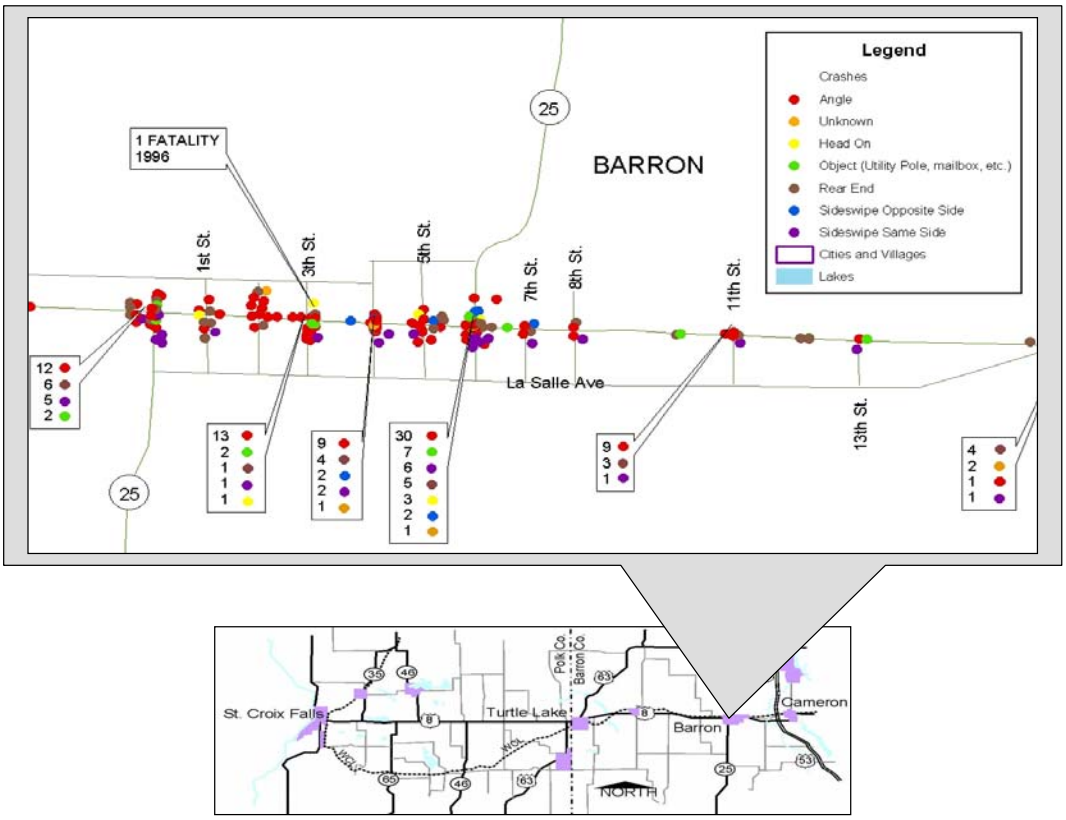

Figure 1.3.5-4 1996-2000 Crashes Within the City of Barron

The fatal crash rate was above the statewide average in three of the five rural segments and in one of the four urban segments as shown in Table 1.3.5-3. There were 13 fatalities along the entire corridor during the 1996-2000 crash analysis period, representing 2.5 percent of all the total crashes. Two of the fatalities were pedestrians. The 13-mile (21 km) westernmost segment (Segment A1) had seven fatal crashes, one of which was a pedestrian. Figure 1.3.5-5 shows Segment A1 from 200th Street to about WIS 46 (S). The second pedestrian fatality occurred in the City of Barron (Segment B4). Segment B5 had two fatal crashes, while Segments B3 and B4 each had one fatal crash.

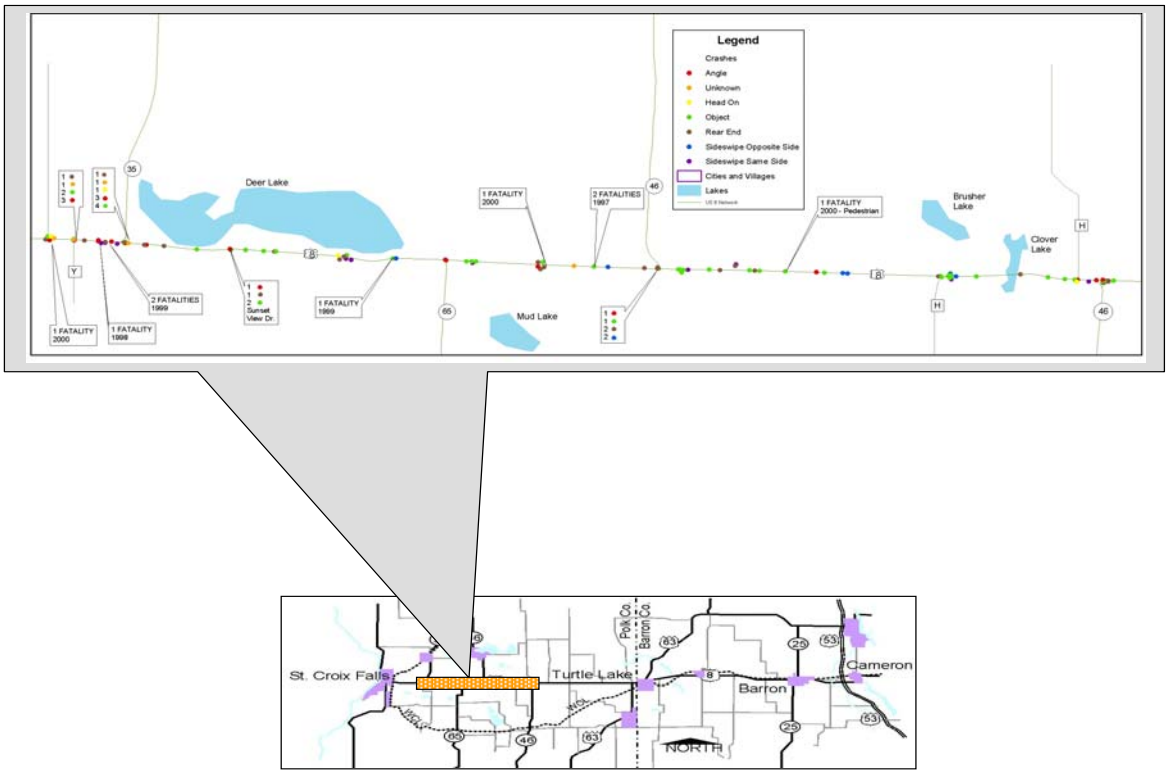

Figure 1.3.5-5 1996-2000 Crashes between WIS 35 (N) and WIS 46 (S)

WisDOT generally initiates safety improvements at intersections with crash rates greater than 2.0 crashes per million entering vehicles[5]. If crash severity is greater than 30 percent, WisDOT may initiate safety improvements at lower crash rates. WisDOT may also examine intersections with a crash rate of 1.5 crashes per million entering vehicles to determine if safety improvements are needed. One intersection along the project corridor, US 8 and WIS 25 (N), was identified as needing safety improvements with an intersection crash rate of 1.55 crashes per million entering vehicles. An improvement adding turn lanes at the existing signalized WIS 25 (N) intersection was constructed in 2005.

It should be noted the crash analysis does not take into account any benefit the recent construction of passing lanes may contribute to lowering crash rates. However, the passing lane locations added between 2000 and 2003 are in sections A2, A3 and B1 and these sections already experienced crash rates lower than the statewide average.

1.3.6 Legislative Mandate and Public Input

A. US 8 Coalition

Since 1994, the stated purpose of the US 8 Coalition has been "to secure the provision of safe and efficient travel, and economic growth on US 8 for the next generation." The US 8 Coalition mission statement says the group will "work cooperatively in promoting, developing, and prioritizing improvements to US 8 from the Minnesota/Wisconsin border to WIS 13 in Price County." The coalition membership includes county highway commissioners, county board committee chairpersons, and four community members each from Barron, Polk, Price, and Rusk Counties. The coalition closely followed the WisDOT-sponsored transportation needs study along a 104-mile (166.4 km) section of US 8 from US 53 (E) to WIS 13. The US 8 Coalition made recommendations to WisDOT and legislators that resulted in funding for the US 8 corridor study resulting in preparation of this EIS starting in 2001. The US 8 Coalition participates in

[5] Intersection crash rate (Crashes per million entering vehicles) = (Total Crashes/in years) x 1,000,000/(ADT x365)

US 8 public forums and holds their own meetings to update members regarding the progress and issues along the project.

B. Transportation Needs Survey

In 2001, approximately 8,000 Transportation Needs surveys were included in a US 8 EIS newsletter mailing to property owners along the corridor. The survey elicited a 25 percent response rate with nearly 2,000 responses. Of the respondents, 89 percent consider it difficult to pass slow-moving vehicles on US 8, and 93 percent consider it difficult to turn left onto or cross US 8. Over half of the respondents stated that the corridor improvement most needed is to increase capacity on US 8. The top two concerns in both the Village of Turtle Lake and the City of Barron include the need for turn lanes and traffic congestion at intersections. Respondents thought that Barron's third most important concern is nonlocal truck traffic and Turtle Lake's third most important concern is the need for more signalized intersections. The survey also asked that respondents to name specific intersections or segments along the corridor they feel are not safe or need improvement. The intersections that were listed most frequently include: the WIS 63/County T, WIS 63 (N)/Maple Street, and WIS 35 intersections with US 8. Respondents also listed the Turtle Lake Casino entrance with US 8 as an intersection that needs improvement. The transportation surveys clearly identified that area residents and US 8 travelers seek improvements to the US 8 corridor.

C. Focus Groups

The study formed four separate focus groups to gather transportation-related concerns along US 8 in both Polk and Barron counties. For each county, there were two focus groups, one made up of local officials and the other made up of citizens and business owners/persons. Members of the focus groups consisted of local business owners, local employers, residents, farmers, and local and county officials, resulting in a total of 50 members. The focus groups met on a monthly basis for six months in 2001 and reported their findings in January 2002. The US 8 focus groups identified many needs as they relate to the highway but many of these needs also exemplified the importance of local transportation systems and land use planning. The focus groups documented all of the identified needs in a summary report. The focus groups listed safe access to and from the highway as their primary concern. In general, focus group members portrayed US 8 as a barrier to safe pedestrian and bicycle movements in the urban areas of Barron and Turtle Lake. Along the rural segments of US 8, the groups felt that the corridor warrants improvements because there are factors that are creating unsafe conditions. These factors include limited right-of-way (R/W) and shoulder space, increasing traffic volumes, high speeds, and the mix of tourist/agricultural/truck vehicles.

D. Vision Workshops

To understand the specific transportation needs of US 8 in Turtle Lake and Barron, the study team hosted two public vision workshops in June 2002. One workshop was held in Barron and the other was held in Turtle Lake. Forty to fifty local participants attended each workshop. These workshops were an opportunity for individuals to participate directly in the future of their communities. Activities during the workshops included identification of transportation-related problems or concerns by local residents and business owners in and around the Barron and Turtle Lake areas and prioritization of the problems. The participants brainstormed potential solutions to the problems identified and performed a mapping exercise to identify potential bypass routes.

The two communities had a number of shared concerns. In Turtle Lake, the major concern of participants was congested intersections, particularly the intersections of US 8/US 63/County T, US 8 and the casino, and US 8/US 63 North. They also listed pedestrian safety near the casino as another concern. In Barron, the major concerns of participants included too much traffic, congested intersections, unsafe pedestrian crossings, and the need for a passing lane between Poskin and Barron.

E. Public Meetings and Outreach

Along the 40-mile (64 km) US 8 corridor, area residents, businesses and farmers have been actively participating in the study process since it began in August 2001. During the first two phases of the study, the Needs Assessment and Alternative Analysis portions, the study team used a variety of information exchange forums including the transportation needs survey, focus group meetings, and vision workshops

`already mentioned. In addition, newsletters, Web site updates, local office hours, and personal and business group meetings have been used to exchange information and gather comment.

A series of public information meetings garnered substantial feedback from property owners and the general public that improvements to US 8 are needed immediately in areas like the City of Barron and at major intersections. The first public meeting in April 2002 introduced the study and the needs assessment. In February 2003, the study team presented conceptual alternatives at the second public information meeting. Many comments were received in the form of returned comment cards, phone calls, verbal discussions, and letters. Residents were primarily concerned about the loss of property resulting from R/W acquisition, the effects of bypasses on communities, and environmental impacts associated with bypass alternatives. In June 2003, the study team held public meetings in Turtle Lake and Barron to present details of the through-town alternatives and refinements to on-alignment alternatives, and review the bypass alternatives for those communities. In October 2003, the study team held a public meeting in Balsam Lake that focused on the alternatives and impacts in the Deer Lake area. Additional comments received continue to state that improvements are needed and include concerns about access, potential relocations, and impacts.

The public has indicated through these forums that the problems affecting US 8 are at a point where the public supports and desires improvements to the US 8 corridor.